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## Audio-Visual Aids Used in Teaching Cosmetology in the I. M. Terrell High School, Fort Worth, Texas

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AUDIO-VISUAL AIDS USED IN TEACHING COSMETOLOGY  
IN THE I. M. TERRELL HIGH SCHOOL,  
FORT WORTH, TEXAS

A Thesis

Presented to the Graduate Division  
of Prairie View Agricultural and Mechanical College  
In Partial Fulfillment of the  
Degree of  
Master of Science

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By

Kathryn Wilburn Saddler

August, 1957

## APPROVAL SHEET

This Thesis for the Master's Degree of Science

By


Kathryn Wilburn Saddler

has been approved for the

Department of

Industrial Education

By

  
Chairman

Date

August 1957

Dedicated to

MY MOTHER,

Mrs. Fannie Wilburn,

whose prayers and tender  
encouragement gave me a  
strong determination to  
reach this goal.

## ACKNOWLEDGMENTS

The writer wishes to express her many thanks to those who assisted her during this study. She is particularly grateful to her advisor, Mr. A. I. Thomas, Director, Division of Industrial Education, whose constant guidance and generous help carried the entire work to its completion; to Mr. H. L. King, Principal, I. M. Terrell High School, whose encouraging remarks gave strength to carry on; to her friend, Hertha Webb, who played such a vital part in helping to obtain data for this study; to her friend Aaron C. Alexander, who proofread and assisted in its correction; and to all who, through the days, expressed hope for its final approval.

K. W. S

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## INTRODUCTION

Long before World War II, audio-visual aids were used by museums, industrial organizations and religious programs. These organizations recognized early the educational qualities of these aids. It was since World War II that I began work as a teacher of vocational cosmetology, and returned to college to further my education. To be exact, I became a member of an audio-visual education class at Prairie View Agricultural and Mechanical College in 1951. Since that time, I have been exposed to audio-visual instructions several times. It was from the benefits received during participation in these classes that I was inspired to choose this subject for study.

I noticed that I learned with more ease and rapidity. The theory matter was simplified and the manipulative processes were more understandable. I felt that the same type of teaching aids would be of similar value in helping to clarify the subject matter and manipulative processes for those who enrolled in cosmetology classes under my supervision. With this inspiration, I began immediately to use audio-visual aids as a part of teaching. I found that the greater percentage of the pupils were stimulated, motivated and became very interested in their work. I noticed, too, that they received a great deal of enjoyment in performing their work.

Emphasis was placed on the hearing and seeing because these are major physical capacities which must be used in order to learn with any degree of success. Educators have pointed up the fact that pupils have been known to be retarded when either one or the other



was affected. Other senses are also important in learning, especially that of touch. In some learning situations the sense of smell and taste are important. Taste is not essential to cosmetology, but those aids which affect the former three in a favorable way may be enriched and are referred to as multisensory aids.

During the collection and analysis of data for this study, a previous study similar to the present work was discovered. Its contents gave further justification to the present investigation. A brief summary of it is included.

## CHAPTER I

### THE PROBLEM

The problem involved in this study is to show how audio-visual aids can be used to increase learning and make teaching more effective in the preparatory training of cosmetologists.

#### The Purpose

The purpose of this study is to show how beneficial audio-visual aids are in improving pupil learning and in making instruction more effective when used in connection with the theory and manipulative skills of the cosmetology classes at the I. M. Terrell High School, Fort Worth, Texas. To accomplish the purpose of this study, the following questions will have to be answered:

1. How can audio-visual aids simplify learning of theoretical information?
  - a. How can these aids help to hold interest in subject matter?
  - b. How can these aids help to motivate pupils?
  - c. How can these aids help to increase the pupil's rate of learning?
  - d. How can these aids influence positive behavior changes?
2. How can audio-visual aids effect the learning of manipulative skills?
  - a. How can these aids motivate performance?
  - b. How can these aids increase accuracy?
  - c. How can these aids help to increase the rate of speed in performing a job?

### Significance of the Problem

There is apparently not too great a recognition and application of audio-visual aids in the field of cosmetology. Because these aids can prove to be of considerable importance to the pupil and teacher, it seemed desirable that a study be made of the best proved audio-visual aids that can be of most value to the pupil engaged in cosmetology. Some of the signs of the problem are: (1) students do not have a vivid conception of abstract terms; (2) there is difficulty in explaining that which is not always available for classroom use; (3) students encounter great difficulty in forming mental images; and (4) students' interests need improving.

The importance of such a study can be based on such factors as (1) increasing one's ability to do more effective work among his class-pupils; (2) being resourceful in one's attempt to get over information; (3) correlating related information; and (4) broadening one's concept in the theoretical area of new ideas as well as learning some advancements in working with pupils.

### Delimitation

All the information available in the field or area of audio-visual aids would not have a direct bearing on cosmetology; therefore, only the contributions and suggestions concerning cosmetology made by educators and authorities of audio-visual education will be included and enlarged upon in this study. That information which is included is organized for the specific age levels of fourteen through seventeen years of age, and for pupils who are attending the I. M. Terrell High School located in Fort Worth, Texas, and who are enrolled in cosmetol-

ogy. It may be used also as a general study in order that it might be applicable whenever and wherever vocational cosmetology is taught and audio-visual aids prove to be needed.

### Definition of Terms

The term "audio" is from the Latin word "audire," which means "to hear", and the term "visual" means "to see".<sup>1</sup>

"Visual instruction" means the presentation of knowledge to be gained through a seeing experience.<sup>2</sup>

According to A. B. Roberts, "visual education" is a method of imparting information which is based upon the psychological principle that one has a better conception of the thing he sees than the thing he reads about or hears discussed.<sup>3</sup>

"Visual aids" are interpreted to mean those materials which make a seeing experience more objective, vivid and easier to understand than ordinary abstract printed material. E. C. Dent defines "visual sensory aids" as "all materials used in the classroom or in other teaching situations to facilitate the understanding of the written or spoken word."<sup>4</sup>

<sup>1</sup>Webster's Collegiate Dictionary. Fifth edition. (William A. Neilson, editor). New York: G & C Merriam Company, Publishers.

<sup>2</sup>A. V. Dorris, Visual Instruction in the Public Schools. Boston: Ginn & Company, 1928.

<sup>3</sup>A. B. Roberts, "An Introduction to Visual Aids." School Activities, Vol. 10 (Jan., 1939), pp. 212, 214, 221.

<sup>4</sup>Elsworth C. Dent, Handbook of Audio-Visual Aids. Chicago: Society for Visual Education, Inc., 1946, p. 21.

In short, these aids are supplementary devices by which the cosmetology teacher, through the utilization of more than one sensory channel, helps to clarify, establish and correlate accurate concepts, interpretations and appreciations for the pupil.

For consideration in this paper, a visual aid may be a flat, projected or unprojected picture, live models, objects, graphs, charts, blackboards, photographs, textbooks, reference books, opaque projector, filmstrips and the motion picture.

Audio-visual aids are those things used during pupil instruction which appeal both to the sense of hearing and to the sense of sight, and which assist in learning activities. Harry C. McKnowan and Alvin B. Roberts have this to say concerning audio-visual aids in instruction:

It is a part of a teaching method designed to aid in the presentation of materials, knowledge, concepts, and adeas in literature, mathematics, science, shopwork, and other fields, both curricular and extra-curricular, in order that they are more easily and clearly understood, and appreciated by the pupil. They are not instructional in themselves. They are in reality, only aids to instruction.<sup>1</sup>

The audio-visual aids for consideration are the sound motion picture and the television. The television is not used for classroom activities as there are no television facilities at the school. The television assignments are made for home viewing, as there are regularly scheduled programs every Saturday, at 10 o'clock A.M., titled "Beauty On The Air", presented by Sellers Beauty School.

"Live models" are those persons whom we work on during demonstration.

"Mannequins" are life-size plastic dolls with human features

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<sup>1</sup> Harry C. McKowan and Alvin B. Roberts, Audio-Visual Aids to Instruction. New York: McGraw-Hill Book Company, Inc., p. 3.

and long hair.

"Block-heads" are forms made of cloth and saw-dust on adjustable braces, that pupils nail the hair to for hot-comb practices before they begin to work on live models.

"Cosmetology" is a science which deals with beautifying and healthful treatments given to the body with the aid of the hands, cosmetics and electrical appliances.

### Source and Methods of Procedure

For convenience of explanation at this time, the teaching experience of the investigator was five years. The observation process developed through this period of time.

### Primary Procedure

Observation of pupils in both theory and laboratory work before and after having taught with audio-visual aids in the school-shop-class.

1st year: Audio-visual aids were used only to a mild degree. Teaching needed improvement.

2nd year: The use of audio-visual aids was increased, and the pupils showed progress.

3rd through the 5th year: Audio-visual aids were used extensively. The results among pupils proved to be worth the effort put forth in the preparation of these aids.

### Secondary Procedure

1. Verification of leading educational philosophers.
2. Historical review of a related investigation.

## CHAPTER II

### THE FUNCTIONS OF AUDIO-VISUAL AIDS IN LEARNING

#### Introduction

The purpose of this chapter is to show the functions of audio-visual aids upon the learning processes of the pupil engaged in cosmetology, and to discuss the major elements involved in the principles of learning. The main topics for discussion are: a brief explanation concerning the pupils and the course -- characteristics and nature, clarification, interest, stimulation, motivation and positive behavior changes.

#### The Pupil and Cosmetology

Pupils entering cosmetology have had very little experience with methods and ways of improving one's appearance. The course in cosmetology covers the discussion of the complete anatomy and physiology of the human body and its outer appearance. In becoming acquainted with the course, the pupil must master a bewildering number of facts, concepts and relationships. The pupils must also coordinate these in such a way that the results will represent organized and helpful insights to the course instead of a mass of confused, unrelated and unusable items. These concepts, facts and relationships must be meaningful to the pupils, and they must be functional. Because of the various operations to be learned in cosmetology, the pupil must learn to do this mastering, coordinating, utilizing and economizing with as little time and effort as possible. Here is where audio-visual aids

can give substantial assistance through clarifying, holding interest, stimulation and motivating the pupil.

### Audio-Visual Aids Assist Learning

The individual pupil has, by nature, many ways by which he may learn. The instinctive ways are the basis on which he must build for higher learning. Out of these basic ways grow the more complicated habitual ways. During these formation days the exposure of the pupil to the correct application of audio-visual sensory aids can prove to be of great value in getting him ready to understand real live situations. Another major characteristic of the pupil is that he remembers longest and best, that which he has seen. Seeing stamps more firmly in his memory the things which seem to be unfamiliar or unusual. Like any human being, the pupil recognizes symbols and thinks in terms of past experiences. These audio-visual aids, sometimes referred to as scientific aids, are tools or instruments used purposely to connect the gap of past experiences to the new learning situation. Accordingly, it is important that we include in our teaching procedures of cosmetology the maximum number of those things or representations of those things which aid in clarifying thought, in making objectively concrete the abstract or imaginary experiences.

One has observed that a book, newspaper or magazine is more readily understood when there are illustrations present to simplify the meaning of the printed material. One has also observed that illustrations alone in some instances fail to give full meaning when there is no printed information. This illustration makes clear that audio-visual aids alone are inadequate. Textbook material, teacher's



explanations, lectures and the scientific sensory aids are interdependent on each other. It is the appropriate use of visual sensory aids only which facilitates learning to the extent that they will increase pupil interest, participation and encourage positive behavior changes.

#### Positive Behavior Changes As Influenced by Audio-Visual Aids

Positive behavior changes develop with normal maturation. Maturation is influenced directly by proper mental growth. One's environment has its major effect on one's mannerisms. It is safe to say that a school pupil spending three-fourths of his day in school has a greater opportunity to develop proper mental growth and to be influenced favorably by the sensory aids used during his class activities, which in turn will result in favorable behavior of the pupil. Crow and Crow define mental growth as "the gradual increase in ability to become aware of and to adapt one's self to environmental conditions and if necessary, to control them."<sup>1</sup> The audio-visual sensory aids are designed especially to help the pupil to make the necessary change by capturing their attention and capitalizing upon this attention. When a pupil's attention is held, one or two things are happening. The pupil is interested or he is curious. At this point, it is left to the teacher to insure his mental attendance by a sound appeal to his active interest or curiosity. This can be done through vicarious experiences. The sound motion picture with the use of a carefully selected film for this purpose plays a vital part in influ-

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<sup>1</sup>Lester D. Crow and Alice Crow, Human Development and Learning. New York: American Book Company, 1956, p. 43.

encing positive behavior changes.

Positive behavior changes are revealed in pleasing personalities which the pupils cultivate as they mature while they are taking the course. One's success in the trade after he has finished his apprenticeship is largely due to a pleasing personality. During the class-shop day this is referred to as "the positive characteristics of a cosmetologist."<sup>1</sup>

A pupil may seem to give behavior evidence of a lower level of mental ability than that which he actually possesses. A good reason for this may be in the inadequacy of environmental influence or it may be because of unfavorable conditions. The purpose behind the use of audio-visual aids at this time is to develop an appreciable amount of positive behavior changes while the pupil is engaged in the learning process of cosmetology, thus creating a better personality and giving him a higher appreciation of himself and the course.

#### Audio-Visual Aids Used for Clarification

Because the hearing and seeing senses represent the major connectives between the pupil and the world about him, learning activity depends directly or indirectly upon the experiences that come through these channels. The internal thinking reactions of the pupil, as with all human beings, include "such mental activities as concentration, reflection, conception, imagination, association, discrimination and recollection. They have their basis in sensory experiences because the mind must have something to think about. Like the stomach, it works

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<sup>1</sup>Constance V. Kibbee, Standard Textbook of Cosmetology. New York: Milady Publishing Corporation, 1955, p. 12.

on what it is fed."<sup>1</sup> In helping the pupils to learn the mechanical and non-mechanical operations of cosmetology, they are fed with these sensory aids through their sense channels. The raw material for mental activity for the pupil may be either of three types:

1. Direct Sensory Experiences With Representations or Reproductions of the Original Item -

The block-head and the mannequin are reproductions and representations of the human head. These "still" models afford daily practice for the pupil during laboratory classwork activities in order that they can perfect their manipulative skills before attempting to work on the live models.

2. Direct Sensory Experiences With Original Item -

In cosmetology, live models are used. In this situation it is possible that live models can be available for classroom use. When discussing theory matter which involves manipulative operations as skills such as manicures, shampoos, massages, shaping and dying the brows, hair-tinting, coiffeur styling and other cares that the patron or customer may need, it is necessary that live models be used for demonstration purposes on presenting the new subject. It should be kept in mind, however, that live models are used after the pupils have been prepared and have become acquainted with the subject through the use of symbolic representations or reproductions of the original item.

3. Symbolic Representations -

Oral and written descriptions are examples of symbolic

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<sup>1</sup>Harry C. McKowan and A. B. Roberts, Audio-Visual Aids to Instruction. New York: McGraw-Hill Book Company, Inc., 1949, p. 36.

representations. This type of instruction is necessary for every learning situation in all activities in which the school engages. By emphasizing the functions of audio-visual aids upon the learning processes of pupils is not meant to minimize the written or oral type of instruction. What is implied is that symbolic representation alone has its limitations. The use of audio-visual aids imprints more firmly the learning for the pupil; for sometimes, symbolic representations become uninteresting, vague and unimaginable.

### Interest

A correct statement could be made to the effect that interest is the basic seat to all learning -- to stimulation, positive behavior changes and motivation. This statement would be too concise and would not allow any light to be shown on the part other elements play in learning. Even though interest is inseparable and interchangeable with these other elements, they are discussed separately.

W. H. Lancelot says that "interest is the inner spring of thought and action, and its influence is apparently greater by far than that of any of the forces which operate upon people from without."<sup>1</sup> While using audio-visual aids in working with pupils in cosmetology, two main thoughts are kept in mind: (1) The pupil is the most sacred thing in the class, and that the various educational materials, equipment and methods are but tools with which the pupils are to be developed and improved; and (2) Audio-visual aids are used basically to harness and hold pupil interest, if interest can be aroused and held.

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<sup>1</sup>W. H. Lancelot, Permanent Learning. New York: John Wiley and Sons, Inc., 1944, p. 31.

Should this be accomplished, it will determine at least two important things for the pupil: (a) It will determine what knowledge he will acquire and keep; (b) It will determine the ideals or goals toward which he will strive throughout life, since ideals are born of interest. These two together -- interest and ideals -- are the motivating forces which determine what understandings each pupil will attain, and what abilities he will acquire.<sup>1</sup> Interest, therefore, is an important force in learning; however, it must be reenforced by thinking ability.

### Thinking Ability.

In every procedure where sensory aids are used in teaching, they have a tendency to bring about a consciousness on the part of the learner. If learning can be thought of as anything at all, it can be considered, above all, a conscious activity. As a conscious activity, learning -- as do the sensory aids -- appeals to the whole array of the mental functions of the pupil. From these functions, interest stems. Thus, interest plays a decisive role in the development of every pupil's thinking ability. "It determines not only his knowledge, which is the raw material of thinking, but also what he will think about and how intently he will think about it."<sup>2</sup> From this reasoning, apparently one of the first functions of interest is to stimulate and guide thinking.

### Audio-Visual Aids As An Incentive to Motivation

The principles of motivation may be said to be rooted in affections or feelings of an individual. Audio-visual aids discover and

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<sup>1</sup>Ibid., p. 32.

<sup>2</sup>Loc. cit.

capitalize on the motives of pupils by claiming their interest first. This expression indicates a recognition by the teacher that there is an individual difference in pupils. All pupils are not of the same motive at all times, even if they are supposedly engaged in the same thing. Motive is used here in reference to anything that is capable of moving or influencing the will. Thus, audio-visual sensory tools are used to give the varied amount of appeal to the individual pupil that is required for motivation.

The individual pupil may be motivated intrinsically or extrinsically. If motivated extrinsically, under favorable conditions, it is possible that his action will be positive and he becomes active enough to move about among his classmates and take part in the class activities. On becoming active and taking part with classmates, he discovers his capabilities. This action exhibits cooperation and participation. His cooperation leads to better class results. He is impressed by his achievements and rewards himself by putting forth more effort to do a better job each time a task is attempted. At this point, the pupil has a tendency to place emphasis on his efforts, and he forgets about self directly and begins to feel that his task is the most important thing at this particular time.

Audio-visual sensory aids under favorable conditions in the classroom provide intrinsic motivation. These teaching devices encourage pupils to develop confidence, to explore and have a satisfactory feeling internally. These devices provide appeal to all types and degrees of interest, and instructional materials and techniques that are useful and natural rather than academic and artificial. Under this type of motivation, the pupil works for the personal satis-

faction that comes from achievement or that comes with the accomplishment. Enjoying this feeling tone the pupil will voluntarily spend hours and hours in working on some project because the activity intrigues him. Intrinsic motivation moves the pupil forward by an inner drive to higher achievements within his own experience and comprehension. This type of motivation is always based on intrinsic feeling.

### Audio-Visual Aids Cause Stimulation

The potentialities of mental development of the pupil lie in his growing physical constitution. This same mental development, if expected to advance to higher learning, requires stimulation by the pupil's immediate social environment in order for mental ability to be transformed into intelligence. The amount and kind of stimulation that a pupil receives during the course of training in cosmetology has a strong influence upon his developing his educational qualities. Unless a pupil has been provided with an opportunity to develop one or more of his mental potentials, he does not know what he can or cannot do. These are the opportunities which audio-visual aids provide in helping the pupils discover and recognize their own capabilities.

When a pupil is really experiencing a sensory aid, his attention is so intense that other things are excluded from his mind. He cannot successfully look at a motion picture, examine an object, do his manipulative operations or give a suitable reaction to the thing he is doing, and think about something else at the same time. A simple explanation of these concrete aids helps the pupils to become more confident that they can produce successfully in the practices of cosmetology. As for the laboratory practices, the pupil



must at least be stimulated to try. He must participate in the manipulative operations of the work; he cannot be just a recipient of theory matter. He must put into practice those skills that are demonstrated by the use of the instructional aids if he expects to become a cosmetologist. These aids encourage the learner to want to learn through actual experiences, as well as by the experiences of others. However, whatever means are used to stimulate pupils in cosmetology are based on individual levels of readiness for learning and on the emotional reaction pattern of each learner.

Audio-visual aids can cause stimulation through the association of ideas which the pupils already have. It can be said that intellectual apprehension is worked out on the basis of already existing ideas with which newly acquired concepts are integrated, so that knowledge arises. This mental operation has been called "apperception".

The principle of apperception can be stated as follows:

In the learning process every new idea is learned to the degree that it is assimilated to the idea already in the mind. As mental process it can be defined as the readiness of the mind to assimilate new ideas.<sup>1</sup>

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<sup>1</sup>S. Alfonso Vargas, Psychology and Philosophy of Teaching. Washington, D. C.: The Catholic University of America Press, 1944, pp. 4-5.



### AUDIO-VISUAL AIDS EMPLOYED IN TEACHING COSMETOLOGY

#### Introduction

The purpose of this chapter is to show how the employment of audio-visual aids with other teaching methods can increase the learning of the pupil enrolled in cosmetology.

The cosmetology class period was three hours long as required by the National Vocational Education Act of 1917, and was known as a "preparatory class." The State-Board of Cosmetologists Examiners, Austin, Texas' course requirement was equal to one-thousand hours. For a pupil to become eligible for the State Board Examination, he has to take the course in cosmetology two regular school terms. The course of study for one school year was designed so that the class will have completed the 465-page textbook by the mid-term (possibly January 23rd). The contents of the book is covered twice a year. The course of study is arranged on a six-weeks basis. The first period is used for theory discussion. The two following periods are used for laboratory practices of the manipulative skills.<sup>1</sup>

#### An Illustrative Unit

##### TWO WEEKS

##### THEORY OF BACTERIA AND STERILIZATION

##### 1. Bacteria

- a. Nature
- b. Classification
- c. Growth and reproduction

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<sup>1</sup>Note: For simplification purposes, these are studied in parts, and gradually put together to complete the whole job.

## 2. Sterilization

- a. Methods
- b. Physical agents
- c. Chemical agents
- d. Wet and dry sterilizer
- e. Safety precautions

### THREE WEEKS

#### PLAIN SHAMPOO

- 1. Structure of the hair
- 2. Plain scalp massage
- 3. Scientific brush treatment
- 4. Anatomy and physiology of the cranium
- 5. Filling and making dispensary orders

### ONE WEEK

#### SHOP DEPARTMENT AND PERSONAL GROOMING

- 1. Personal hygiene
- 2. Personal appearance
- 3. Posture
- 4. Behavior

An outline of one of the lessons in the unit, "Plain Shampoo", will show illustrations of the methods used to teach this lesson. Similar procedures are followed for the other various content subjects.

**Subject:** Plain Shampoo

**Objectives:** To cleanse the scalp and hair.

To have pupils understand the value and purposes of clean hair and scalp.

To have pupils know and understand the structure of the hair.

To acquaint pupils with the manipulative techniques of massage, and have them understand the effect

of these techniques upon the anatomy of the head and hair.

To have pupils know and understand the elasticity and durability of the hair.

**Methods:** The day before the subject "shampoos" is to be discussed, the instructional sheets are given to the pupil. They are the "assignment, operation, information and job sheets." These sheets provide information that makes the following day's school shop-activities clear. The teacher opens the lesson by asking a few informal questions, such as: "How many of you have noticed the different textures of hair?" Several said that they did. Each had an opportunity to explain what they had noticed. They were asked to try to remember the various colors of hair that they had noticed. Several attempted to answer this request. They were then asked to try to associate the colors with the kind of texture that they remembered. By this time, the subject of shampooing was under way. The pupils felt free to talk.

### Visual Aids Used, First Day

- Models : Course, medium and fine strains of hair
- Pictures : Pictures of lifeless or dull hair (poor shampoos as a result)
- Posters : Showing microscopic drawings of the structure of hair
- Filmstrip : The filmstrip is preferable for use at this time because the teacher may talk as the strip is shown. It is possible to stop the filmstrip at any point if one wants to stress or emphasize it.

### Audio-Visual Aids Used, Second day

#### The Sound Motion Picture:

The pupils are now ready to view and understand the commentary on a carefully and specifically selected film which pertains to the hair and to the shampoo. The motion picture film is usually thirty to forty minutes long. If it is possible, one is selected which contains information on both the structure of the hair and the job "shampooing." If this is not possible, then two pictures are selected, but only one picture is shown per school day.

The second picture was shown the following day.

The pupils were asked not to talk to each other during the showing of the film. They were informed of special points to look for,

but they were not told of the picture generally, because of fear of affecting their interest. After viewing the picture, the pupils were asked how they wanted to report as to what they had seen. Some said, "Write the report." Others said, "Use the oral question and answer method;" while still others said, "Just let us tell what we saw in comparison to what we have discussed here in class." There were a few — one or two, maybe three — who had little or no reaction at all as to how they wished to report. The teacher then said, "Suppose we use all the methods given as suggestions, and this will give all of us an opportunity to do our best. Right now, let different ones attempt to discuss what they saw. If anything of importance is left out, we will ask questions, and on tomorrow, we will hand in a written report of our picture and class discussion.

#### Demonstration:

The teacher selected or accepted a pupil from the class (a pupil may sometimes volunteer) to use as patron for demonstration purposes. In the beginning of every job the methods of sterilization and sanitation are reviewed, and the preparation of the patron is discussed. How to make dispensary orders is taught in every class.

The appropriate materials and supplies are discussed fully. The procedure is spelled out. The texture of the hair is identified. The brush treatment and plain scalp massage are gone through completely.<sup>1</sup> Techniques and positions of every operation are pointed up. Pupils may ask questions at any time during the demonstration. The hair and scalp are shampooed, dried and groomed.<sup>2</sup>

For every job, three factors are pointed out as guideposts to students. They are:

1. Definition: What is the job?
2. Materials and Supplies: What to select as appropriate?
3. Procedure: How is the job done?

#### Outcomes:

1. Interest      - The pupils were interested in that they gave attention.
2. Stimulation      - The pupils were stimulated to take part in the class activities, even those who, at first, had little or no reaction.
3. Motivation      - The pupils were motivated to try the manipulative skills.

<sup>1</sup> Note: The brush treatment and plain scalp massage for beginners are taught as separate jobs at the beginning of the course, but they are understood to be a part of every shampoo.

<sup>2</sup> Note: The theory discussion, showing of the picture, and demonstration usually take the entire three hours of the class period. The following day during the laboratory period, the pupils begin their manipulative practices, while the teacher supervises.

4. Behavior - The pupils practiced favorable shop activities.
5. Consciousness - The pupils became aware that they were a part of a learning situation, and adapted themselves to the environment.

Testing: At intervals and at the end of the six-weeks period, pupils were tested for progress and understanding.

Methods -

1. True and False
2. Essay
3. Completion
4. Multiple Choice
5. Questions selected by pupils

### Other Lessons

Other lessons were approached and developed in a similar fashion to that of the "plain shampoo." Instructional aids used were designed to suit the subject. All instructional aids, whether visual, auditory or both, were selected and viewed before their presentation to the class.

Title of Film:

Filmstrip - "The Nature and Structure of Hair"

Sound Film - "Shampooing the Hair Makes it Healthier and Lovelier"

The films were obtained from the Fort Worth Public Administration Audio-Visual Division. Other special films were purchased through the supervisory department head from The Rayette Film Incorporation, New York City, New York.

## REVIEW OF A RELATED INVESTIGATION

Introduction

The purpose of this chapter is to present the high points of a previous investigation relating to the present undertaking, but the methodology employed and the approach used are different. Interest in this investigation arose out of the question, "Is it possible to measure and evaluate the effectiveness of the use of audio-visual instructional aids?" The findings of the study help to verify the importance of the present investigation and its conclusion.

The Investigation

In 1954, Branch<sup>1</sup> made a survey to determine the educational progress of thirty, fourth-grade pupils in language arts and social studies classes at the W. D. Wallace Elementary School of Colorado City, Texas. Fifteen pupils were taught with the use of audio-visual instructional aids and fifteen taught without the use of audio-visual aids. Each group was tested at the beginning and at the end of the experimental period. The experimental period was equal to eighteen weeks. It began in September, 1952, and terminated in January, 1953. Comparative examinations were administered at the beginning and between the period. The tests used were: The Otis Quick-Scoring Mental Ability, Alpha Form A; and the Metropolitan Achievement and the Elementary Battery. The results of the tests given in September, 1952,

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<sup>1</sup>Hattye V. Branch, "The Use of Audio-Visual Aids in the W. D. Wallace Elementary School, Colorado City." Unpublished Master's Thesis, Prairie View Agricultural and Mechanical College, Prairie View, Texas, 1954, pp. 10-59.



are indicated in Table I -- the experimental group A, and Table II -- the control group B. These data were obtained prior to the use of audio-visual aids for instructional purposes. (See tables, pages 26, 27 and 28).

The comparison of the two groups shows that the groups were approximately equal at the beginning of the experiment in chronological and mental ages, in intelligence quotients, and in language arts and social studies achievements.

The experiment began by employing such instructional visual aids as posters, charts, maps, graphs, pictures, slides, films, and the bulletin board. Such audio-visual aids as the sound motion picture and the phonograph were used with Group A. The same units were studied by both groups, but no aids -- except those contained in the textbook -- were used for Group B. This procedure continued for nine weeks. At the end of this period, the pupils in each group were again tested and the same type of tests given. Both groups had advanced, chronologically, four and one-half months. Group A showed the obvious increase in chronological ages and a corresponding increase in mental ages, and approximately stable intelligence quotients. Group B showed the obvious increase in chronological ages, but only a slight increase in mental ages and intelligence quotients. The experiment continued for another nine weeks, along the same procedure, until the eighteen weeks expired. At the end of the eighteen-week period, both groups were again tested with the same type instruments. Table III (page 28), shows the groups compared. "The outcome as revealed by this investigation is definitely in favor of the use of audio-visual

materials. They add reality, stimulate interest, and inspire greater scholastic effort."<sup>1</sup>

The favorable findings which the investigator encountered led her to make the following conclusions:

(1) Children taught with audio-visual aids have a better opportunity of grade equivalent advance than to children taught without audio-visual aids.

(2) Audio-visual aids stimulate interest, desire to learn, and the acquisition of factual information.

(3) No attempt was made in the investigation to measure the respective emotional adjustments of the two groups.

(4) It is the opinion of the investigator, based on the above test results, that attitudes of the experimental group were, on the whole, superior to the attitudes of the control group.<sup>2</sup>

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<sup>1</sup>Ibid., p. 55.

<sup>2</sup>Ibid., p. 58.

TABLE I

DATA ON EXPERIMENTAL GROUP A  
(September, 1952)

Pupil Number	Chronological Age <sup>1</sup>		Mental Age <sup>2</sup>		I. Q. <sup>2</sup>	Grade Equivalent <sup>3</sup>		Grade Equivalent <sup>4</sup> Social Studies
	Years	Months	Years	Months		Language Arts		
1	9.4	112	9.10	118	105	3.2		2.8
2	9.4	112	6.4	76	68	3.5		4.8
3	9.5	113	10.9	129	114	3.9		3.9
4	9.5	113	10.2	122	108	3.9		3.9
5	9.7	115	8.7	103	90	3.9		4.4
6	9.7	115	8.10	106	92	3.9		4.8
7	9.10	118	7.8	92	78	3.5		3.9
8	9.10	118	8.6	102	86	3.6		2.8
9	9.10	118	9.4	112	95	4.8		5.9
10	9.10	118	9.3	111	94	5.9		5.9
11	10.9	129	7.6	90	70	3.2		4.4
12	9.11	119	11.10	142	119	5.9		2.8
13	10.11	131	7.8	92	70	3.4		3.6
14	11.11	143	5.9	69	48	2.2		2.5
15	12.9	153	2.10	34	22	2.2		2.5

<sup>1</sup>Based on school records<sup>2</sup>Based on the Otis Quick-Scoring Mental Ability Tests, Alpha Test<sup>3</sup>Based on the Metropolitan Achievement Test, Battery A, including tests in reading, vocabulary, language usage, and spelling<sup>4</sup>Based on local tests prepared by a faculty committee

TABLE II

DATA ON EXPERIMENTAL GROUP B  
(September, 1952)

Pupil Number	Chronological Age <sup>1</sup>		Mental Age <sup>2</sup>		I. Q. <sup>2</sup>	Grade Equivalent <sup>3</sup>		Grade Equivalent <sup>4</sup>	
	Years	Months	Years	Months		Language Arts	Social Studies		
1	9.2	110	8.3	99	90	3.4	2.2		
2	9.2	110	7.4	88	88	3.5	5.3		
3	9.2	111	8.8	104	94	3.2	3.9		
4	9.4	112	12.4	148	132	5.1	5.6		
5	9.4	112	10.7	127	113	4.2	4.3		
6	9.5	113	7.0	84	74	2.6	3.2		
7	9.6	114	8.5	101	88	3.4	3.4		
8	9.8	116	9.1	10	95	3.9	3.6		
9	9.11	119	6.4	76	64	2.1	2.0		
10	9.11	119	9.3	111	92	3.9	3.8		
11	10.0	120	10.11	131	109	4.1	4.2		
12	10.1	121	11.4	136	112	3.2	3.8		
13	10.9	129	7.6	90	70	2.8	3.9		
14	11.1	133	7.9	93	70	2.6	2.3		
15	12.3	147	4.11	59	40	1.1	1.0		

<sup>1</sup>Based on school records<sup>2</sup>Based on the Otis quick-scoring Mental Ability Tests, Alpha Test<sup>3</sup>Based on the Metropolitan Achievement Test, Battery A, including tests in reading, vocabulary, language usage and spelling<sup>4</sup>Based on local tests prepared by a faculty committee

TABLE III

## THE EXPERIMENTAL AND CONTROL GROUPS COMPARED

Item	Mental Age		Language Arts		Social Studies	
	A1	B2	A1	B2	A1	B2
Normal increase	5 months	5 months	5 months	5 months	5 months	5 months
Number approaching normal increase	12	7	4	1	5	1
Number exceeding	0	3	9	1	7	1
Number failing to meet normal increase	3	5	2	13	3	13
Median increase	5 months	5 months	6 months	0 months	5 months	1 month
Average increase	4½ months	4½ months	5.7 months	1 month	7.5 months	0.3 months

<sup>1</sup>Group A, the experimental group, was trained with audio-visual aids

<sup>2</sup>Group B, the control group, was trained without audio-visual aids

### SUMMARY, CONCLUSION, RECOMMENDATIONS

This study has been prepared with emphasis placed on the use of audio-visual aids for teaching cosmetology. The origin of the study grew out of the experience of having been a member of an audio-visual education class, and later observing the effects of these aids upon the members of the class. This experience provided the basis for the consciousness that these aids were performing special functions. These multisensory aids assisted the characteristics of nature in that they helped to develop more favorably , through training, the otherwise complicated instinctive ways.

The people engaged in cosmetology must be taught in a regular and systematic fashion in order that they may develop the character, personality, poise, knowledge and understanding of operative manipulations to become a successful licensed cosmetologist. For this kind of learning the pupil should have real or concrete situations for daily preparation. Visual objects -- those things that can be seen -- such as pictures, posters, graphs and charts; auditory experiences, different from that of, but in conjunction with the teacher, help to make more vivid certain images. They stamp learning more firmly in the pupil's mind than does just ordinary book discussion. Audio-visual aids provide experiences for the pupil that have at least a five-fold purpose. They were:

1. Clarifies pupil understanding

2. Stimulates
3. Motivates
4. Holds interest
5. Develops positive behavior

An illustrative teaching unit was cited with emphasis on the "plain shampoo" lesson in order to acquaint one with the teaching elements involved in getting this information over to the pupil. With every lesson it is kept in mind that the pupil is the most important element in the teaching situation; however, there must be an objective, planned methods, selected teaching aids, demonstrations and, most important, the outcomes for the pupil.

A review of a similar investigation was presented to shed light on the present study. The writer was given full credit for her works. The present approach studied the problem in a different manner. Its approach involved what leading educational philosophers had to say concerning it. It is from these authorities -- as my secondary source, and my personal observation -- the primary source, that I base my conclusions and recommendations.

### Conclusion

Because of both direct and indirect experiences, the observations made of pupils in the classroom situation, the favorable results, and the statements of leading educational philosophers, I concluded that the use of audio-visual aids for instructional assistance among pupils are subject to unpredictable worth. I firmly believe that every cosmetologist who is engaged in the teaching profession should employ, as the teaching occasion demands, the use of audio-

visual aids in her or his teaching methods.

I am convinced that these aids perform all the fore-stated functions as described in helping to increase the learning and make teaching more effective among pupils.

### Recommendations

Based on the study, the writer wishes to recommend the following for consideration and practice when one is responsible for getting over information of a concrete sort:

1. The use of audio-visual aids for providing a background of factual information for the teaching of cosmetology.
2. The use of audio-visual aids for stimulating reflective thinking when discussing cosmetology theory.
3. The use of audio-visual aids for motivating pupils in cosmetology to practice the manipulative skills of the course.
4. The use of audio-visual aids to coordinate the mind and the physical organs to perform the manipulative skills.

In the last two recommendations, I am reminded of Dewey, who said:

In this discussion of physical activity, I have in mind, for the most part, that of the organs of the body, especially the hands, as employed directly with simple materials, or at most such simple appliances as a pencil, brush, etc. A higher form of activity involving the sensimotor apparatus of the body is found when the control over tools of some sort, or by the application of one material to another.<sup>1</sup>

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<sup>1</sup>John Dewey, Interests and Efforts in Education. New York: Houghton Mifflin Company, 1913, pp. 74-75.



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